Anomalies Detected

Chiller Checkup with the HiPerWare Platform

Case study: During checkup, the HiPerWare platform identified a problem with one of the chillers and refrigeration automation systems in a cold warehouse facility. After correcting the problem, the customer saved 12% energy and the cost of unplanned equipment repairs.

Symptoms: excessive energy consumption of chillers to maintain a temperature of -18C. The current SCADA system could not determine the cause.

Problem: Instrumental analysis, measurement of chiller operating patterns - energy consumption (1 measurement per second), temperature, pressure showed that chiller #3 was operating in an incorrect mode, turning on and off several times per minute. This resulted in increased wear and energy consumption.

Solution: Reconfiguring the automation and continuing to track equipment operation with HiPerWare solved the problem. Without HiPerWare, it would've been difficult to perform such in-depth diagnostics without shutting down the equipment. The implementation was non-intrusive and the data was collected frequently, like a cardiogram, allowing for an accurate understanding of the ongoing operational processes.

Result: Just like humans, buildings equipment requires regular Checkups to identify potential problems and optimize operations. In this case big data analysis in the HiPerWare platform allowed to identify issues in chiller operating pattern, not visible in the existing SCADA system.

This saved 12% of energy consumption, increased equipment lifetime, and reduced risks of accidents and overloads of the power grid, due to high inrush currents.